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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/572,405

05/18/2007

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8009

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7590

03/16/2009

EXAMINER

REDDICK, MARIE L

ART UNIT

PAPER NUMBER

1796

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DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/572,405

**Applicant(s)**

BUCKLEY ET AL.

**Examiner**

MARIE REDDICK

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 3.5-7.9.11/06; 2.5.6.8/07 & 2.5.6/08.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☒ Claim(s) 2-6, 9, 13, 14, 16 and 19-21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

### Specification

The disclosure is objected to because of the following informalities: a) On page 6, line 6, the recited "with not interaction with the film" engenders a grammatical deficiency, b) on page 7, line 7, in the phrase "PVA is used herein to polyvinyl alcohol", a connector is missing between "to" and "polyvinyl alcohol" and c) on page 9, line 7, "grater" should read "greater".

Appropriate correction is required.

### Claim Objections

Applicant is advised that should claims 5 & 6 be found allowable, claim 6 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

In Claim 2, line 2, the “comma” between “weight” and “plasticizer” should be deleted.

In Claims 3 & 4, a period is missing at the end of each claim.

In Claim 9, line 2, “an” should read “a” so as to engender grammatical clarity.

In Claims 13 and 14, it is believed that applicant intends “effectively vs. “affectivity”, such considered an obvious typographical error.

In Claim 16, line 1, “produced” should read “produce”.

In Claims 19 and 20, line 1, “multi-layered” should read “multi-layer” so as to engender claim language consistency.

In Claim 21, line 3, “polyjmer” should read “polymer”.

#### Claim Rejections - 35 USC § 112

Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A) The recited “low molecular weight” & “high molecular weight” per claims 1 & 2 constitute indefinite subject matter as per the metes and bound of “low” and “high” engender an indeterminacy in scope, said terms being relative and not absolute.

B) The recited “1-85 % water by weight” per claims 3, 4, 13 & 14 constitutes indefinite subject matter as per the weight basis is not defined, i.e., it is not clear if such is based on the entire water-soluble polymer film or else.

C) The recited “PE/PVA” copolymer and “plasticized 99 % PVA” per claims 5 & 6 and “99+% hydrolyzed PVA” per claims 9 & 10 constitute indefinite subject matter as per it not being readily ascertainable as to what each acronym stands for. Further it is not clear, from the language as claimed, the exact intent of the “99 % governing the “PVA”. Does applicant

intend such to engender "mole % of hydrolysis"? Further, it is not clear if the "% hydrolyzed" is "weight or mole" percent.

D) The recited "hot water soluble polymers" per claims 5 & 6 constitutes indefinite subject matter as per it not being readily ascertainable as to the number of polymers intended in light of the use of the plural form of "polymer".

E) The recited "whereby the water content in the liquid, gel or paste being packaged is 60-85 % by weight" per claims 7 and 8 constitutes indefinite subject matter as per 1) the non-express establishment of proper antecedent basis for the phrase "being packaged" and 2) the weight basis is not defined by the claim.

F) The recited "cold water-insoluble layer or layers" per claims 9 & 10 constitutes indefinite subject matter as per the non-express establishment of proper antecedent basis.

G) The recited "such that" per claims 11 & 12 constitutes indefinite subject matter as per it not being readily ascertainable as to how said objectionable terminology further limits the claims.

H) The recited "said aqueous based liquid" per claims 11 & 12 constitutes indefinite subject matter as per the non-express establishment of proper antecedent basis.

I) The recited "can be" per claims 13 and 14 constitutes indefinite subject matter as per it not being readily ascertainable as to how said objectionable terminology further limits the claims.

J) The recited "the cold water-insoluble layer in claim three" per claim 15 constitutes indefinite subject matter as per 1) "the cold water-insoluble layer" engenders the non-express establishment of proper antecedent basis and 2) "claim three" is an improperly recited claim dependency, "three" should read "3".

K) The recited "A method" per claims 15-18, 21 and 22 constitutes indefinite subject matter as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. It is not clear from the language as claimed as to how the "water-soluble polymeric film" is being produced.

L) The recited "the extrusion process" per claim 16 constitutes indefinite subject matter as per the non-express establishment of proper antecedent basis.

M) The recited "a low molecular weight" and "less hydrolyzed PVA can be" per claim 17 constitutes indefinite subject matter as per a) the metes and bounds of "low" and "less hydrolyzed" engender indeterminacy in scope, said terminology being realative and not absolute and b) it is not clear as to the exact meaning of the acronym "PVA" and c) it is not apparent if or how said objectionable terminology "can be" further limits the claims.

N) The recited "the filling process" per claims 19 and 20 constitutes indefinite subject matter as per the non-express establishment of proper antecedent basis.

O) The recited "the compounded polymer feedstock" per claim 21 constitutes indefinite subject matter as per the non-express establishment of proper antecedent basis. Further the process limitations are confusing.

P) The recited "a polymer" per claim 21 constitutes indefinite subject matter as per the metes and bounds of such engender indeterminacy in scope.

Q) The recited "existing cold water soluble film" per claims 5 & 6 constitutes indefinite subject matter as per it not being readily ascertainable as to whether applicant intends the polymeric film of the claimed invention or a film in addition thereto.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Isozaki et al (U.S. 6,608,121).

Isozaki et al teach water-soluble resin compositions and water-soluble films derived therefrom, used in packaging various chemicals such as dyes, detergents, disinfectants, etc. (col. 23, lines 62-67 & claims 3 & 4), wherein said compositions comprise a polyvinyl alcohol polymer (100 pbw), a plasticizer (1-50 pbw), a mono- and/or polysaccharide (5-50 pbw) and, optionally, with an inorganic filler (1 to 20 pbw). See the Abstract of Isozaki et al. More specifically, Isozaki et al teach water-soluble films derived from compositions, defined in terms of composition/film A1, A2, B1 and B2, which basically include the same components as described supra and include (i) a polyvinyl alcohol polymer with a degree of hydrolysis of at least 90 mole %, (ii) at least one plasticizer, used for the purpose of improving the water-solubility of the composition and film, which includes glycerol, propylene glycol,

trimethylolpropane, polyethylene glycol, sufficient to meet the low and high molecular weight plasticizers per the instant claims (col. 5, lines 43-67 to col. 6, lines 1-32 and claims 1 & 2), (iii) a mono- or polysaccharide, not precluded from the instant claims in light of the "comprising" language and (iv) at least one inorganic filler which includes silica, silicate salts, calcium carbonate, talc, sufficient to meet the mineral and salt nucleating agents (col. 7, lines 21-36 and claims 1 & 2). Isozaki et al further teach that further conventional adjuvants may be added to the composition which include colorants, perfumes, extenders, etc. Isozaki et al teach that the water-soluble composition may be produced by mixing the ingredients by appropriate methods such as blending and that the water-soluble films may be produced by any of the conventional film production methods used in producing films such as film casting, film extrusion, coating processes, etc. (col. 8, lines 10-51).

The disclosure of Isozaki et al differs basically from the claimed invention as per the non-express disclosure of an embodiment directed to the use of a combination of a low molecular weight plasticizer, a high molecular weight plasticizer and a mineral (claim 1) or salt (claim 2) nucleating agent. However, one having ordinary skill in the art, at the time the invention was made, would have found it obvious to use the aforementioned combination of plasticizers and nucleating agent (inorganic filler) as per such having within the purview of the general disclosure of Isozaki et al and with a reasonable expectation of enhancing the water solubility of the composition/film, i.e., a reasonable expectation of success, with the understanding that the terms "low" and "high" are relative and not absolute. At best, the recited plasticizers are generic to the claimed plasticizers, in terms of molecular weight, and therefore necessarily implies that any plasticizer, including the claimed plasticizers would have been operable within the scope of patentees invention and with a reasonable expectation of success.



It is well settled that the recitation of a new intended use for an old product does not make a claim to that old product patentable. See *In re Spada*, 911 F.2d 705, 708, 15 USPQ2d 1655, 1657 (Fed.Cir. 1990) ("The discovery of a new property or use of a previously known composition, even when that property and use are unobvious from prior art, can not impart patentability to claims to the known composition."), i.e., nucleating agent vs. inorganic filler.

As to the water content in the film per claims 3, 4, 7, 8 & 13, the utility of the water-soluble films taught in *Isozaki et al* for packaging various chemicals as detergents, disinfectants, etc. (col. 23, lines 61-67) meet the claimed liquid packaging. Moreover, *Isozaki et al* exemplify filled packing bags containing water (col. 12, lines 47-64, Run 1). Although generic, such is a necessary implication that any water content, including the claimed water content, would have been operable within the scope of patentees invention and with a reasonable expectation of success. Criticality for such not having been demonstrated on this record.

As to the multilayered water-soluble film limitation, the multilayered films of *Isozaki et al* as exemplified per Run 1 houses a multilayered film derived from a plasticized 99 mol % hydrolyzed PVA laminated to a an aluminum/polyethylene film. Therefore, it would have been obvious to the skilled artisan, at the time the invention was made, to use the plasticized polyvinyl alcohol film of *Isozaki et al*, as modified *supra*, in lieu of the plasticized polyvinyl alcohol film exemplified per Run 1 as per such having been within the purview of the general disclosure of *Isozaki et al*, and with a reasonable expectation of success (claims 5, 6, 19 & 20). The manner in which the multilayered film is produced is immaterial as provided for under the auspices of *In re Thorpe* (777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)).

As to claims (9 & 10)/1 & (15-18, 21 & 22)/15, the limitations are met by *Isozaki et al* with the understanding that the claims are drawn to a water-soluble polymeric film and a method

of producing a water-soluble polymeric film, respectively. The subsequent claim limitations have no antecedent basis.

As to claims 11-14, it would be expected that the cold water-soluble film of Isozaki et al, would satisfy the limitations as recited in the claims since the cold water-soluble film of Isozaki et al, as modified, is essentially the same as the claimed cold water-soluble film. Moreover, the limitation "can be produced" is relative and not absolute.

#### Claim Rejections - 35 USC § 103

Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wysong (U.S. 4,206,101).

Wysong teaches cold water-soluble films, prepared by conventional melt extrusion processes and useful in the packaging of liquid substances such as liquid agricultural formulations, cleaning products such as laundry detergents and bleaches, etc. (paragraph bridging cols. 5 & 6 of Wysong and claims 1-4) derived basically from compositions containing 5-20 pbw of polyethylene glycol having an average molecular weight between 325 and 550, 100 pbw of polyvinyl alcohol having a degree of hydrolysis of about 85 to 90 mole %, small quantities ( $\leq$  5 pbw based on 100pbw polyvinyl alcohol) of common additives incorporated before or after extrusion such as talc, inorganic fillers which include clays, silicas, silicates such as sodium silicate (sufficient to meet the mineral and salt nucleating agents, col. 4, lines 28-65 of Wysong and claims 1& 2). Wysong further teaches that small quantities of water-soluble polymers compatible with the polyvinyl alcohol component can be used as coplasticizers and include polyethers such as polyethylene glycols with a molecular weight of 600 (sufficient to meet the high molecular weight plasticizer per claims 1 & 2, see col. 5, lines 6-21 of Wysong).

Wysong differs basically from the claimed invention as per the non-express disclosure directed to a combination of a low molecular weight plasticizer, a high molecular weight plasticizer and a mineral or salt nucleating agent. However, one having ordinary skill in the art would have found it obvious, at the time the invention was made, to extrapolate from the disclosure of Wysong, the precisely defined water-soluble film as per such having been within the purview of the general disclosure of Wysong and with a reasonable expectation of success, with the understanding that the terms "low" and "high" are relative and not absolute. Moreover, the use of a low molecular weight polyethylene glycol component in lieu of the average molecular weight polyethylene glycol component would have been obvious to one of ordinary skill in the art as implied with the understanding that some disadvantages may come along. Although in the form of a negative teaching, it is nonetheless taught (col. 3, lines 39-43 of Wysong & claims 1 & 2). "[C]ase law does not require that a particular combination must be the preferred, or the most desirable, combination described in the prior art in order to provide the motivation for the current invention." In re Fulton, 391 F.3d 1995, 1200 (Fed. Cir. 2004).

All of the disclosures of a prior art reference, including non-preferred embodiments, must be considered for what they fairly teach one of ordinary skill in the art. Merck & Co. Inc. v. Biocraft Labs. Inc., 874 F.2d 804, 807 (Fed. Cir. 1989).

As to the water content in the film per claims 3, 4, 7, 8 & 13, the utility of the water-soluble films taught in Wysong for packaging liquid substances dispersed in water such as laundry detergents and bleaches etc. (col. 5, lines 58-67 to col. 6, lines 1-14) meet the claimed liquid packaging. Although generic, such is a necessary implication that any water content, including the claimed water content, would have been operable within the scope of patentees

invention and with a reasonable expectation of success. Criticality for such not having been demonstrated on this record.

As to the multilayered water-soluble film limitation, the multilayered films of Wysong as exemplified per Run 5 houses a multilayered film derived from a plasticized polyvinyl alcohol laminated to a polyethylene/aluminum foil/Kraft paper laminate. Therefore, it would have been obvious to the skilled artisan, at the time the invention was made, to use the plasticized polyvinyl alcohol film of Wysong, as modified supra, in lieu of the plasticized polyvinyl alcohol film exemplified per Run 5 as per such having been within the purview of the general disclosure of Wysong, and with a reasonable expectation of success (claims 5, 6, 19 & 20). The manner in which the multilayered film is produced is immaterial as provided for under the auspices of *In re Thorpe* (777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)).

As to claims (9 & 10)/1 & (15-18, 21 & 22)/15, the limitations are met by Wysong with the understanding that the claims are drawn to a water-soluble polymeric film and a method of producing a water-soluble polymeric film, respectively. The subsequent claim limitations have no antecedent basis.

As to claims 11-14, it would be expected that the cold water-soluble film of Wysong would satisfy the limitations as recited in the claims since the cold water-soluble film of Wysong, as modified, is essentially the same as the claimed cold water-soluble film. Moreover, the limitation "can be produced" is relative and not absolute.

U.S. Patents 4,119,604 (Wysong), 4,156,047 (Wysong), 4,215,169 (Wysong) & 5,688,510 (Nakamichi et al) are cited as of interest in teaching water-soluble films comprising at least polyvinyl alcohol and are considered merely cumulative to the prior art supra.

The remainder of the prior art is cited as of being illustrative of the general state of the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARIE REDDICK whose telephone number is 2-5816. The examiner can normally be reached on 6:30 am to 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DAVID WU can be reached on 2-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

M.R.  
03/12/09

/David Wu/  
Supervisory Patent Examiner, Art Unit 1796